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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
09/976,946	10/12/2001	Richard A. Elco	FCI-2642 C2285A	2569

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EXAMINER
LEE, BENNY T

ART UNIT	PAPER NUMBER
2817	

DATE MAILED: 11/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
976946	Elco, Richard
Examiner	Group Art Unit
BENNY T. LEE PRIMARY EXAMINER ART UNIT 2817	

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

/ Responsive to communication(s) filed on 26 August 2002.

This action is **FINAL.**

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

/ Claim(s) 1-5, 16-27 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

/ Claim(s) 1, 3, 4, 5, 17, 19, 20, 21, 23, 28 is/are rejected.

/ Claim(s) 2, 16, 18, 22, 24-27 is/are objected to.

Claim(s) _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

/ The proposed drawing correction, filed on 26 Aug 2002 is / approved disapproved.

The drawing(s) filed on _____ is/are objected to by the Examiner.

/ The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____.

Attachment(s)

/ Information Disclosure Statement(s), PTO-1449, Paper No(s). 6

Interview Summary, PTO-413

Notice of Reference(s) Cited, PTO-892

Notice of Informal Patent Application, PTO-152

Notice of Draftsperson's Patent Drawing Review, PTO-948

Other _____

Office Action Summary

Applicant's cancellation of non-elected claims 7-15 renders moot the restriction requirement.

The disclosure is objected to because of the following informalities: Page 12, lines 5, 8, 12, 18, note that --channel-- should follow each occurrence of "dielectric" for consistency of description. Appropriate correction is required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5, 17, 19, 20, 21, 23, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnett et al (of record) and the Butterweck paper (cited by applicant) taken in combination.

Barnett et al (fig. 1) discloses a substrate (8) having a waveguide having walls (12, 14, 16) and an air filled waveguide (20) disposed thereon.

Butterweck (fig. 5) discloses a waveguide comprised of first and second "C" shaped channels configured such that a gap is formed along the axis of the waveguide. The gap within the waveguide configuration functions as a mode filter permitting the fundamental order mode (i.e. $H_{1,0}$ mode) to propagate within the waveguide while preventing higher order (i.e. $H_{m,0}$, where m is not equal to 1, and preferably is even) modes from propagating within the waveguide

Barnett et al differs from the claimed invention in that it lacks the specific waveguide having the gap, while Butterweck discloses the waveguide with the gap but does not disclose that the waveguide is supported by a substrate.

Accordingly, it would have been obvious to have combined the teachings from each reference to have provided a waveguide configuration having a waveguide with a gap being supported by a substrate. Such a modification would have been considered obvious since it would have provided the advantageous benefit of a waveguide with a gap to prevent higher order mode propagation (as taught by Butterweck) being formed in an integral manner on a substrate (as taught by Barnett et al), thereby suggesting the obviousness of such a combination.

The waveguide of the above combination, being an electromagnetic wave propagating medium, inherently must include ends thereof connected respectively to a transmitter (for waveguide) and a receiver (for receiving the waves propagated through the waveguide).

Claims 3, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the preceding rejection as applied to claim 1 above, and further in view of Ishikawa et al (of record).

Ishikawa et al discloses that there are certain applications for such waveguides (i.e. satellite, mobile). Accordingly, for such satellite or mobile applications, obviously use of transceivers for providing the transmit and/or receive functions would have provided a desired optimization for such a transmit and/or receive functions, thereby suggesting the obviousness of such a modification. Furthermore, inherent within any transceiver would have been a "modem" as would have been known to those of ordinary skill in the art.

Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Claims 2, 16, 18, 22, 24-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benny Lee whose telephone number is (703) 308 4902.

BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817

B. Lee

November 8, 2002